

Claims

1. A wind power plant where the driving shaft communicates with a synchronous generator (3) ~~optionally~~ through a gear (2) and with a transformer with n output windings, said transformer communicating through an AC/DC rectifier with an HVDC transmission cable (9), measures being taken so as to secure against possible variations in the speed of rotation, c h a r a c t e r i s e d by a magnetic field controller (4) connected to the generator (3), said magnetic field controller (4) being adapted to vary the magnetic field in the synchronous generator (3) in response to a speed of rotation-depending output parameter of said generator (3) in such a manner that possible variations in the speed of rotation are compensated for, whereby the AC/DC rectifier is composed of diodes. *only*
2. A wind power plant as claimed in claim 1, c h a r a c t e r i s e d in that the magnetic field controller (4) is adapted to detect the currents (IG1, IG2) generated by the synchronous generator (3), a negative feedback being established for regulating the current through the rotor winding (3a).
3. A wind power plant as claimed in claim 1, c h a r a c t e r i s e d in that the magnetic field controller (4) is adapted to detect the voltages (IG1, IG2) generated by the synchronous generator (3), a negative feedback being established for regulating the current through the rotor winding (3a).
4. A wind power plant as claimed in claim 1, c h a r a c t e r i s e d in that the magnetic field controller (4) is adapted to detect the power generated by the generator (3), a negative feedback being established for regulating the current through the rotor winding (3a) in response to the detected power.
5. A wind power plant as claimed in claim 4, c h a r a c t e r i s e d in that the negative feedback for regulating the current through the rotor windings (3a) includes a P, I or D regulation or a combination thereof.

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6. A wind power plant as claimed in one or more of the preceding claims, c h a r -
a c t e r i s e d in that the rotor windings are dimensioned with a relatively low
inductance.

7. A wind power plant as claimed in one or more of the preceding claims, c h a r -
5 a c t e r i s e d in that the rotor is adapted to rotate at a relatively high speed of
rotation, whereby the inductance can be further reduced.

8. A wind power plant as claimed in one or more of the preceding claims, c h a r -
a c t e r i s e d in that the synchronous generator (3) is multipolar.

9. A wind power plant as claimed in one or more of the preceding claims, where the
10 wind turbine comprises a transformer with n output windings coupled in series with
n rectifiers so as to obtain an HVDC.

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